

JOHN ACTUARIUS' *DE METHODO MEDENDI*—ON THE NEW EDITION

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Τιωάννης Ζαχαρίας, which is the form of the name which has been transmitted to us by the majority of the manuscripts and letterheads of his contemporaries,¹ and who, on the basis of his position at the imperial court in Constantinople later held the title ἀκτονάριος, is generally considered to be one of the last great doctors in Byzantium.² Although this estimation is sometimes called into question, it is nevertheless advisable to stick to it for the moment as axiomatic. At the end of this essay we can return to the problem and pose the question anew.

The information concerning his life which one finds in the available textbooks is quite meager. To get beyond this information requires tedious effort, much like putting together a mosaic, and I cannot pursue it here *in extenso*. Precisely because this is the case, I would like to attempt a brief synopsis of the more certain data concerning his life.³ Then I will treat of his medical education, and, fi-

[The reader is referred to the list of abbreviations at the end of the volume.]

¹ Regarding the family name “Zacharias” in the Palaeologian period, cf. E. Trapp, *Prosopographisches Lexikon der Palaiologenzeit*, 3 Faszikel (Wien, 1978), 143–46.

² Several examples: H. Haeser, *Lehrbuch der Geschichte der Medizin*, 3rd ed., I (Jena, 1875), 481 ff.; H. Schelenz, *Geschichte der Pharmazie* (Berlin, 1904), 193; K. Sudhoff, *Kurzes Handbuch der Geschichte der Medizin* (Berlin, 1922), 134 f.; G. K. Pournaropoulos, *Συμβολὴ εἰς τὴν ιστορίαν τῆς βυζαντινῆς ιατρικῆς* (Athens, 1942), 170; P. Diepgen, *Geschichte der Medizin. Die historische Entwicklung der Heilkunde und des ärztlichen Lebens*, I (Berlin, 1949), 168 f.; H. Hunger, “Medizin,” 312 f.; Sournia-Poulet-Martin, *Illustrierte Geschichte der Medizin*, II, German edition under the direction of R. Toellner (Salzburg, 1980), 468.

³ After completing the manuscript for this paper, I came upon the essay by S. I. Kuruses, ‘Ο ἀκτονάριος Τιωάννης Ζαχαρίας παραλήπτης τῆς ἐπιστολῆς ἡ τοῦ Γεωργίου Λακαπηνοῦ. Τὰ βιογραφικά,’ *Αθηνᾶ*, 78 (1980–1982, published 1983), 237–76, referred to hereafter as “Kuruses II.” Concerning John’s biographical data, the pertinent results of Kuruses’ study agree essentially with my own. For the epistolography of the time and the results which can be garnered from it concerning John Ac-

nally, speak about his medical writings and the edition which has been begun.

Today it is the *communis opinio*, at least on the evidence of the pertinent compendia,⁴ to place John’s golden age in the years when the Emperor Andronikos III ruled. This view, however, must be complemented and corrected on the basis of John’s correspondence, as well as on the basis of information which John himself gives in his writings. With the dedication of his major work, which I will designate with the brief Latin title *De methodo medendi*, to Alexios Apokaukos, we have a definite point of reference in time; for this Apokaukos is well known to us in the political history of the fourteenth century.⁵ In the manuscripts, we read that the work was written for the Parakoimomenos Apokaukos, who later received the title of a Megas Dux.⁶ Apokaukos received the title Parakoi-

tuarius and his circle of friends, I refer to S. I. Kuruses, *Τὸ ἐπιστολάριον Γεωργίου Λακαπηνοῦ καὶ Ανδρονίκου Ζαρίδου. Παρατηρήσεις χρονολογικαὶ, προσωπογραφικαὶ καὶ ἐμμνευτικαἱ*, *Αθηνᾶ*, 77 (1978–1979), 291–386; referred to hereafter as “Kuruses I.”

⁴ Krumbacher, 615; G. Sarton, *Introduction*, III:1, 889; H. Hunger, “Medizin,” 313. Following Lambecius, Meyer, *Botanik*, III (1856), is somewhat more circumspect in his observations; he also rejects other data concerning John’s life (cf. *ibid.* p. 383–90). Cf. K. Sudhoff, *op. cit.*, 134 and P. Diepgen, *op. cit.*, 168. This of course did not prevent some publications of the last decade from dating him in the twelfth or thirteenth centuries. Cf. M. Putscher, *Pneuma, Spiritus, Geist. Vorstellungen vom Lebensantrieb in ihren geschichtlichen Wandlungen* (Wiesbaden, 1973), 180, and L. J. T. Murphy, *The History of Urology* (Springfield, Ill., 1972), 126.

⁵ Cf. R. Guilland, *Correspondance de Nicéphore Grégoras* (Paris, 1927), 299–301; *id.*, *Recherches sur les institutions byzantines*, I (Amsterdam, 1967), 210; G. Weiss, *Johannes Kantakuzenos—Aristokrat, Staatsmann, Kaiser und Mönch—in der Gesellschaftsentwicklung von Byzanz im 14. Jahrhundert* (Wiesbaden, 1969), 25–29 and *passim*; Johannes Kantakuzenos, *Geschichte*, ed. and trans. (German) by G. Fatouros and I. Krischer. Erster Teil. Bibliothek der Griechischen Literatur, 17 (Stuttgart, 1982), 221, note 47 with bibliography.

⁶ . . . τῷ παρακοιμωμένῳ τῷ Ἀποκαύκῳ τῷ καὶ ὑστερον χρηματίσαντι μεγάλῃ δουκί. Cf. G. A. Costomiris, “Etudes sur

momenos about 1321 from Emperor Andronikos II,⁷ and he kept the title under his successor, Andronikos III, until he was named Megas Dux in 1341.⁸ This means that the first book, in any case, of *De methodo medendi* must have been composed between 1321 and 1341. This time-span can, however, be narrowed down. This first book was given to Apokaukos on a diplomatic mission which he undertook in the fall; the second book was supposed to be finished upon his return in the following spring. In the meantime John wrote another composition for his teacher, Joseph the Philosopher.⁹ If the latter died in 1330 or 1331, this means the first book must have been written in 1329 or 1330 at the latest.¹⁰ Unfortunately, we are unable to date exactly the diplomatic mission of Apokaukos, and therefore cannot fix an exact date for the composition of these books.¹¹ Beyond scattered references in his own works, what we are otherwise able to ascertain regarding dates in John's life comes from the epistolography of the time and from the mention of his person in letters from his contemporaries, and there is a whole series of these. I wish to cite here the most important ones, in order to set some fixed points of reference in John's life, as far as this is possible.

From a letter of Georgios Lakapenos¹² in the fall of 1299,¹³ we learn that John was staying at that time in Constantinople and was considering moving to Thessalonica. Lakapenos advises him against it. We learn also that John has his mother and other relatives in Constantinople and that he is engaged in the study of medicine, but that he has not yet completed his studies. Lakapenos speaks in this letter of the rather meager resources which John

les écrits inédits des anciens médecins. Cinquième série. XII^e–XIV^e siècles,” *REG*, 11 (1898), 414–45.

⁷Cf. especially Guilland, *Recherches*, I (Amsterdam, 1967), 210 with note 141.

⁸Joh. Kantuk. III, 36 (Bonn ed., II, 218); cf. R. Guilland, *Recherches*, I loc. cit.

⁹*De diagnosi* I, 57 (ed. Ideler, II, 417; and II, prooem., 418).

¹⁰*Terminus ante quem* is the death of Joseph the Philosopher. He must have died before Theodoros Metochites (March 13, 1332), for the latter laments his death in a letter to a friend. John Zacharias does not mention Joseph's death. He also says nothing about the success of Apokaukos' diplomatic mission.

¹¹Cf. note 75 below. The diplomatic mission was to the ὑπερβόρειοι Σκύθαι (Ideler, II, 353). The Mongols or Tartars are designated by historians of the time as ὑπερβόρειοι Σκύθαι (cf. G. Moravcsik, *Byzantinoturcica*, 2nd ed., II [Berlin, 1958], 228). Σκυθία is designated as their territory.

¹²*Georgii Lacapeni et Andronici Zaridae Epistulae XXXII cum epistolis Lacapeni*, ed. S. Lindstam (Gothoburgi, 1924), ep. 10, p. 80–88.

¹³For dating this letter, cf. Kuruses I, 322–23, with information on pertinent bibliography; also in Kuruses II, 240.

has at his disposal.¹⁴ This is a rather general reference; but it could not have been made if Lakapenos did not know that John actually had no greater wealth at his disposal. Considering the circumstances, Lakapenos urges him to behave as a reasonable man and to prefer the quiet, ordered life in Constantinople to the difficulties which would be awaiting him in Thessalonica.

The tone of this letter permits us to conjecture that the author and the addressee are of approximately the same age. They are friends and have other friends in common. We can fix John's date of birth around 1275 or a bit later.¹⁵ If we also consider the fact that Joseph the Philosopher (also known as Joseph Rhakendytēs) was his teacher and friend, we can scarcely place the year of John's birth much earlier, since Joseph himself was born in 1260.¹⁶

Whether John followed the advice of Lakapenos and remained in Constantinople or whether he did go to Thessalonica, we do not know. From a later letter of Lakapenos, written before 1307,¹⁷ and in all probability quite some time before 1307, we learn that John is well known by this time as Ἰατρὸς ἀγαθός, as a good doctor, and that the author himself experienced this in a situation in which he himself was ill.

Here we can pinpoint one of John's character traits, namely, that he did not suffer from a lack of self-confidence. We should not ascribe that to some sort of Byzantinism, however; for this character trait is widespread in our own day, especially among doctors, not to mention scholars. Lakapenos was accustomed to reading to his friends the letters he was about to send. When John read the letter in which his friend's illness was mentioned, he protested quite loudly that he had been treated unfairly: Lakapenos neither related the case history nor did he report John's efforts and his contribution to healing the illness. This state of affairs is later set aright; Lakapenos admits the injustice and declares that he has only John to thank for the im-

¹⁴Ep. 10 (ed. Lindstam, p. 81, 32–82, 5 and 88, 10 f).

¹⁵One can conclude this from the fact that G. Lakapenos was among the students of Maximos Planudes in 1293. Cf. Kuruses I, 370 with note 4.

¹⁶Joseph's date of birth can be inferred only approximately from information given by Metochites (M. Treu, “Der Philosoph Joseph,” *BZ*, 8 [1899], 1–64, here 14, 2–3) that he was about 50 years old at the time of his death, perhaps somewhat younger, perhaps a bit older.

¹⁷Ep. 20 (ed. Lindstam, p. 128, 31–129, 21). In ep. 18 (p. 121, 16 Lindstam) John is designated as χορυφαῖος in his company of friends. For dating this corpus of letters within the years c. 1307–c. 1315, cf. Kuruses I, *passim* and also II, 250 f.

provement of his health.¹⁸ One cannot overlook a certain irony on the part of Lakapenos.

John must have received the title of ἀκτουάριος¹⁹ between 1310 and 1323. This can be verified in a letter of Michael Gabras, which was written in 1323. In the letter John is praised, but there is no mention made of the new honor. Therefore we can conclude that John did not receive the title just prior to the date of this letter.²⁰

The date of John's death cannot be determined. We possess no news of him or about him which with certainty might be dated during the reign of Emperor Andronikos III. Gabras' last letter to John falls in the year 1327.²¹ The work Περὶ ἐνεργειῶν καὶ παθῶν τοῦ ψυχικοῦ πνεύματος, which he wrote for his teacher Joseph, must have been completed before the latter's death in 1330 or 1331. At any rate, John does not mention Joseph's death. *De methodo medendi* was written after the work for Joseph, five books of it in any case. Whether John died in 1328, or shortly thereafter, must for the moment remain an open question. The silence of the sources concerning him could possibly be interpreted in another way.

After this brief synopsis of the most important external data concerning John, which on the basis of the sources must of necessity remain unclear in many points, I will attempt to say something about his education as a doctor and about his education in general.

With regard to questions concerning the professional education of doctors in Byzantium, we do not possess much certain testimony from the sources. Therefore, in this area, there are some unfounded suppositions and false hypotheses; so the information which we do possess on John in this regard can lead to a clarification on some points, at least for his own time. I have emphasized several times in other places that medical education in Byzantium must be seen in his connection with the ἐγκύκλιος παιδεία, and against the background of a correctly understood φιλοσοφία. Further, I think this is true not only for Byzantium and not only for the Middle Ages. On this point John is by no means the only witness, albeit a rather good one.

¹⁸Ep. 20 (ed. Lindstam, p. 129, 5–21).

¹⁹Cf. below p. 124–25, especially note 35.

²⁰John is named three times as the addressee in the letters of Michael Gabras (G. Fatouros, *Die Briefe des Michael Gabras (ca. 1290–nach 1350)*, I.II, *WByzSt*, 10 [1973]): ep. 52, 310 and 439. In the last two instances he bears the title ἀκτουάριος. Ep. 310 should be dated in the 1323, ep. 52 in the year 130 (cf. Fatouros, I, 18).

²¹Ep. 439.

In his work *De urinis*, John speaks of the motives which led him to the pursuit of medicine, and the first one he names is a longstanding tendency toward the φυσικὸν μέρος τῆς φιλοσοφίας,²² that is, to the natural sciences. He occupies himself with them as far as possible. His special love was for medical science, whose θεωρία he studied thoroughly. He took into consideration its φιλάνθρωπον as well as the θεραπευτικόν, but, on the other hand, he was also interested in its connection with φιλοσοφία.²³ He was always hesitant, as he says, to venture upon the treatment of sick people without first having thoroughly studied their illnesses. One must act with care and forethought (with λογικὴ ἐπιστασία).²⁴ In time he made progress, and in the belief that he could contribute to the τέχνη, he composed his work, in which theory and everyday experience are combined.²⁵

So much for motives and consequences. In the report of sicknesses which he lists in *De urinis*, John gives a series of examples which testify to his attitude.²⁶ As for the course of studies itself, we must return to the letter of Lakapenos of fall 1299, which we used in our treatment of the particulars of John's life. From this letter we learn that John has not yet completed his medical studies, that he is not yet in possession of the τέχνη, and that he is improving his τέχνη through daily practice in a φροντιστήριον.²⁷ If he were to go to Thessalonica, his friend explains to him, he would not have the appropriate opportunities for these pursuits. He has not yet arrived at the κολοφών, and therefore he has not yet received the κηρύγματα. I will explain below what is meant here. Lakapenos reproaches him: it is indeed poor, if someone entrusted to treat diseases which are not yet well known does not keep such clear and evident arguments in mind.

John practices daily in a φροντιστήριον. In Byzantine times this word designated a place of education, a school (διδασκαλεῖον), but also, and preferably, the monastery or the monk's cell, and finally the place for taking care of the poor, the weak and the sick.²⁸ This was, as we know, often connected

²²Ideler, II, 190, 7.

²³Ideler, II, 190, 11.

²⁴Ideler, II, 190, 19 f.

²⁵Ideler, II, 190, 20.

²⁶Ideler, II, 50, 26–52, 1; 62, 29–63, 13; 92, 9–93, 3; 154, 31–156, 14; 162, 17–163, 27; 165, 9–166, 16; 166, 27–167, 8; 181, 12–183, 12; 186, 7–187, 4.

²⁷Ep. 10 (ed. Lindstam, p. 82, 7–10).

²⁸Cf. Lampe, s.v.; Anna Komnena, *Alexiad* III, 8, 2 (ed. Leib, I, 125, 31, in which the emperor's palace during the regency of Anna Dalassena is compared with τερά φροντιστήρια); VI, 3, 2

with a monastery. For this interpretation of the word we can cite numerous examples, from Gregory of Nazianzus and Emperor Julian to Anna Komnena and into the late Byzantine Era. A later scholium to our letter confirms the synonymity of the concepts φροντιστήριον and νοσοκομεῖον or ξενών.²⁹ We know that there was a series of hospitals in Constantinople and elsewhere in the empire.³⁰ We also know that into the late Byzantine period new ones were built and those that had fallen into disuse were restored to use. Just as well known is the fact that medicine was taught in such institutions. In the *Typikon* of the Pantokrator-Monastery,³¹ mention is made of a διδάσκαλος τῆς ιατρικῆς ἐπιστήμης, who instructed the παῖδες ιατρῶν there.³²

(Leib, II, 46, 19); XV, 7, 2 (Leib III, 214, 24 in connection with the Orphanotropheion); cf. also XV, 7, 7 (Leib III, 217); *Theophyl. Achrid. Opera*, ed. P. Gautier (CFHB, XVI, 1; 1980), 189, 17; *Nikeph. Bryenn.*, ed. P. Gautier (CFHB, IX; 1975), 103, 21 and 141, 1. Concerning the φροντιστήριον as a center of education which enjoyed a rank superior to that of the διδάσκαλεῖον, cf. Agathias, *Hist.*, ed. R. Keydell (CFHB; 1967), V, 21 (p. 190, 32–191, 2); cf. also Zachar. Scholast., *De mundi opificio*, PG, 85, 1021 B and Manuel Moschopoulos in *Lexicon Philastr.*: φροντιστήρια· τὰ διδάσκαλεῖα τῶν φιλοσόφων· λέγοντο δ' ἀν οὐτῷ καὶ τὰ παρ' ἡμῶν μοναστήρια. Cf. also *Hesychii Lexicon*, s.v.: φροντιστήριον· διατριβὴ καὶ τὸ οἰκημα Σωκράτους καὶ τὸ σχολεῖον καὶ μοναστήριον, and *Suda*, s.v.: φροντιστήριον· διατριβὴ ἡ μοναστήριον, ὅπερ Ἀττικοὶ σεμνεῖον καλοῦσιν.

²⁹ Cf. F. Fuchs, *Die höheren Schulen von Konstantinopel im Mittelalter* (Leipzig/Berlin, 1926), 61 with note 6.

³⁰ Cf. the compilation of D. J. Constantelos, *Byzantine Philanthropy and Social Welfare* (New Brunswick, 1968), 149–276, and more recently, K. Mentzou-Meimare, Ἐπαρχιακὰ εὐναγῆ ιδρύματα μέχρι τοῦ τέλους τῆς εἰλονομαχίας, *Βυζαντινά* 11 (1982), 243–308. Reference to specific bibliographical data can be overlooked in this context.

³¹ Ed. P. Gautier, *REB*, 32 (1974), 1–145.

³² Gautier, *REB*, 32 (1974), 107, 1313–16. On this point a brief excursus does indeed seem necessary, as certain wrong ideas crept in here, indeed in conjunction with a particular interpretation of the Hippocratic Oath—ideas, moreover, which are still lurking around as well in the most recent Byzantine professional literature. In the passage of the *Typikon* in question, this teacher was supposed to instruct the παῖδες ιατρῶν, literally translated, “the children of the doctors.” And because the genitive ξενώνος (in the hospital) stands next to the expression, one always assumed that this man was charged with instructing the children of the doctors employed in the hospital. Such an interpretation makes no sense in the context of the whole regimentation. The doctors in the Pantokrator Hospital lived outside the hospital when they were not on night duty. Why would they bring their children along every day for instruction in the hospital? But apart from that, the concept παῖδες ιατρῶν refers to the students of medicine and the young doctors. This can be verified at least since the time of Plato, and there is a great deal of evidence for it in the Byzantine literature, and indeed in the most differentiated genera of this literature. We have treatises for Byzantine hospitals, for example, with the title Προσταγαὶ καὶ τύποι τῶν μεγάλων ξενώνων ὅσα ἐκ περισσαὶ παῖδες θεραπείας χάρον προσάγουσι . . . , and the παῖδες ιατρῶν there are young doctors or assistants, who, however they may be trained, dispense medicine to the sick. A letter of Symeon Magistros (ed. J. Darrouzès, no. 68) clearly shows the application of

But let us get back to our letter of 1299. John has not yet completed his studies and has not yet received certification. He has not yet arrived at the endpoint, the κολοφών, and has therefore received as yet no κηρύγματα. These κηρύγματα represent the crowning point of the whole process. Whether or not this word is a *terminus technicus* we cannot say with certainty. In any case, it designated the public, legal character of the final examination. It is not necessary to cite legal texts, which treat of the examination of doctors and which regulate their teaching obligations according to the position they occupy, but clear, however, is the concern of the state for medical competence. In Byzantium this was much more distinctly regulated and defined than was the case in the West during the Middle Ages; and, of course, it can be verified at a much earlier date. We can observe this already in the time of the early Byzantine period, e.g., in the legal codices of Emperor Theodosios II and of Justinian. The already mentioned passage from the *Typikon* of the Pantokrator-Monastery in Constantinople offers a good proof for the twelfth century, for which we also have other testimony at our disposal, e.g., a synodal decision of 1140.³³ Concerning the education of doctors, this decision stipulates that they are to have studied the λόγος ιατρικῆς τέχνης, that they must have a lengthy education, and finally that they receive the σύμβολον ἐπικρίσεως. That is approximately the same thing which Lakapenos calls the κηρύγματα in his letter to John.

Whatever the case may be regarding John's residence in Thessalonica, in 1307, at the latest, he is considered an acknowledged doctor; and we know that from 1323 he uses the title ἀκτουάριος.³⁴ From the twelfth century for sure (and perhaps from the eleventh century as well),³⁵ we have testimony for

this concept to the doctors. John himself bears testimony to it also when he says that it is the business of the παῖδες ιατρῶν to understand the salutary medicines and the anodynes and to dispense them. The question posed by Kuruses (II, p. 249) in connection with his reflections on this matter, namely, whether John's father was a ιατρὸς ξενώνος, appears to me therefore as irrelevant.

³³ V. Grumel, *Regestes des actes du patriarchat de Constantinople*, I, 3 (1947), no. 1007; *id.*, “La Profession médicale à Byzance (à l'époque des Comnènes),” *REB*, 7 (1949), 42–46; the text: Rhalles-Potles, *Σύνταγμα τῶν θείων καὶ ιερῶν κανόνων*, V (1855), 76–82.

³⁴ Cf. above, p. 123.

³⁵ Whether the brother of the doctor whose death Psellos Laments (ed. K. N. Sathas, *Μεσσωνικὴ Βιβλιοθήκη*, V (1876), 96–102), actually as a doctor bore the title ἀκτουάριος is uncertain. Concerning the development of this title, cf. the compilation in Kuruses II, p. 252–57; also regarding the ἀκτουάριος of the Palaeological period.

this title in Byzantium in connection with medicine, in the letters of Michael Italikos as well³⁶ as in the so-called *Ptochoprodromika*.³⁷ We are aware of ἀκτούάροι during the whole late Byzantine period. It appears that this title signifies the highest echelon of the official medical hierarchy in the empire.

I would like to bring up two points in John's professional activity:

1. In the work *De urinis* there is a series of case histories³⁸ from which we can surmise that he made house calls, made diagnoses, and dispensed medicine. Frequently the patients in question are people who are personally known to John and who obviously wish to ask his advice, although they have already consulted other doctors. Again and again mention is made of the *ἰατροί θαμζότες*,³⁹ that is, of doctors who make frequent visits; and frequently these doctors prevail over John's opinion, indeed not always for the welfare of the patients. These cases are differentiated; they relate also to different specialized areas of medicine, and the patients frequently, though by no means always, belong to the highest levels of society. The question has, of course, been asked, whether John, perhaps even as ἀκτούάροις, had a practice, whether he made housecalls, and so on. He certainly made housecalls, but whether he did so as ἀκτούάροις seems questionable to me. It cannot, however, be ruled out considering his interest in the matter. It would scarcely have been the rule, however. Unfortunately, the reports do not offer more exact information which could be of help in setting down dates.

The reports show John's diagnostic as well as his prognostic abilities, they give information about the practice of medicine in Byzantium as well as about quackery, which obviously existed also. From the reports we clearly recognize that these Byzantine doctors, insofar as they took their profession seriously, always considered the entire person in making their diagnoses.

There is the case of a man suffering from a liver disorder who finally contracts jaundice;⁴⁰ this disease, apart from poor nutrition, is traced back to

³⁶Cf. P. Gautier, *Michael Italikos, Lettres et discours*. (Paris, 1972 [AOC 14]), 46–49, 111–15 (monody on the ἀκτούάροις Pantechnes); *ibid.* 209–10 (letter to an ἀκτούάροις [Pantechnes]).

³⁷D. C. Hesselink-H. Pernot, *Poèmes prodromiques en Grec Vulgaire*, III, 415 (Amsterdam, 1910), 69.

³⁸Cf. note 26 above.

³⁹Ideler, II, 163, 19; 182, 18.

⁴⁰Ideler, II, 154, 31–156, 14.

his psychic condition. He cannot overcome an injustice that has been done him.

In another case John diagnoses the malady of a wealthy woman⁴¹ whose period does not take place. At first she thinks she is pregnant, but because she has a great deal of pain, she calls the doctors; in the fifth month of the illness John is called in for consultation. First he takes her pulse, which is very weak. The patient's skin color is sallow and looks like the color of someone suffering from jaundice. Around the face, hands and shoulders she is very thin; her body is very swollen. John does a uroscopy and finds blood in the urine. At this point in time John himself has only textbook knowledge of gynecology, and the other doctors who are present know nothing; they diagnosed dropsy. John studies the books of female diseases and compares what he has learned with the results of the uroscopy. And he arrives, as he says, at the correct diagnosis: ἐπίσχεσις ἐπιμηνίων, whereby he explains the blood in the urine on the basis of the proximity of uterus and bladder. Soon, severe hemorrhaging begins and the blood is mixed with pus. After a brief apparent improvement, the woman dies. On this occasion, one learns something of the psychic background of the case: the woman wanted to have another child and sought advice from other women as to how she might bring about a pregnancy. John indicates, albeit tactfully, that the advice was obviously not conducive to the woman's health. Here, as well as in another case in which an uneducated woman refuses the medicine proffered her by John, because in her folly she does not know what a φάρμακον is, we can take a look into the medical culture of that period, a glance at the cultural-historical source value of such professional literature, especially the case histories.

2. The second point concerns John's assertion that he frequently visited the *ἰατρεῖον*.⁴² In all probability he had patients there and perhaps treated them. Whether he did so regularly, we do not know. By this *ἰατρεῖον* is obviously not meant a private practice. Otherwise John's manner of expression would not be intelligible when he says he often visited the place and learned of a particular case there. "Iatreion" is the term for the hospital. The word is thus used in the *Typikon* of the Pantocrator-Monastery as well.⁴³

⁴¹Ideler, II, 181, 12–183, 12.

⁴²Ideler, II, 95, 324–96, 6. Ἐγωγε μὴν καὶ τι τοιοῦτον μέμνημαι ἰδῶν περὶ τὸ ιατρεῖον θαμζῶν. . . .

⁴³Ed. Gautier, p. 89, 1000 and 93, 1070. Nevertheless, the word is used in the same *Typikon* with a different meaning.

Now I would like to say something about the education of John in general, not only because it adds to a complete picture of the man, but also because it is fundamentally important for the attitude of the Byzantines toward education in general and, not least of all, toward the education of doctors.

In a letter of Georgios Lakapenos,⁴⁴ John is designated as the greatest credit to his circle of friends and as *ἰατρός τ' ἀγαθὸς κρατερός τε φιλόσοφος*, a good doctor and a great philosopher. In the manuscripts we meet him as *σοφώτατος καὶ λογιώτατος βασιλικὸς ἰατρός*,⁴⁵ the wisest and very learned doctor of the imperial court. In the letters of Gabras mention is made of the *σὺν λόγῳ ζῶν*, who loves everything which has to do with the *τέχνη λόγων*.⁴⁶ Gabras sends John a speech to the emperor for his evaluation. There is an interesting passage in the introduction to *De urinis*,⁴⁷ where John says he was considering returning to the *λόγου*, whose charm lay in the reading of them; but he nevertheless recognized that, although educated in other fields, he would be wasting his time on this point. So he decided to occupy himself with that area of the *λόγοι* which would be of use to the others. Not the beauty of words about empty subjects should convince, but rather the content. Here is not the place to go into the contemporary historical-critical import of this passage; in any case it is telling for John. Even taking into account the character of *captatio benevolentiae*, the passage lets us see that John had made the usual *ἐγκύρωλιος παιδεία* of the time his own and accordingly decided in favor of medicine. By no means did he deny the value of this *ἐγκύρωλιος παιδεία*; we have sufficient evidence for this. For himself, however, with a view toward efficacy, he chose medicine.

The letters of this period offer a good insight into John's versatility. To arrange all of this in a systematic and perhaps even chronological way is a tedious piece of work that is hardly appropriate for a short paper. I will, therefore, summarize on this point and indicate the results.

John belongs to a circle of pupils under Maximos Planudes, who, in addition to grammar, rhetoric and prosody, occupied himself with mathematics, music and perhaps even with medicine.⁴⁸

⁴⁴ *Ep.* 20 (ed. Lindstam, p. 128, 32).

⁴⁵ For example, *Paris. graec. 2256*.

⁴⁶ *Ep.* 439 (ed. Fatouros, p. 677, 8).

⁴⁷ Ideler, II, 3.

⁴⁸ Cf. C. Wendel, "Planudes," *RE* XX, 2 (1950), 2202–53; *id.*, "Planudes als Bücherfreund," *Zentralblatt f. Bibliothekswesen*, 58 (1941), 77–87.

He is also a friend of John and of Andronikos Zaridas⁴⁹ and of Georgios Lakapenos, whose letters we have mentioned several times. They, too, are pupils of Planudes. Beyond that, they are men who concern themselves with a comprehensive education, who collect books and copy them, just as did Joseph Rhakendytes,⁵⁰ who planned a comprehensive encyclopedia of all knowledge, and whose knowledge of medicine is not to be denied, although just how deep this knowledge went is another question.⁵¹ We have already seen Michael Gabras among John's friends; other names could be mentioned, but I will stop here. The important thing is that John had good contacts with the *ἀρχοντες* in the imperial palace, and he belonged even to the circle of scholars in the company of Emperor Andronikos, so that he could use his influence for his friends there. We hear a number of times that he is asked to do so.⁵² This circle around Andronikos II included the elite of the literary society of the time in the capital. Of course a significant role in this group was played by, as we would say today, the philologists. But to a certain extent, there is perhaps a problem of terminology or semantics. To be a *philologos* in the Constantinople of the fourteenth century meant much more than to be a philologist in the twentieth century, even if at a university. These people are not satisfied simply with Aischylos, Sophokles or Euripides. They are filled with a love and an enthusiasm for everything

⁴⁹ *Ep.* 18 (ed. Lindstam, p. 120–21); cf. Kuruses I, *passim*.

⁵⁰ Cf. M. Treu, *BZ*, 8 (1899), 1–64; R. Guilland, *Nicéphore Grégoras, Correspondance* (Paris, 1927), 338–42; B. N. Tatakes, 'Η βυζαντινή φιλοσοφία, translated by E. K. Kalpourtzes. 'Ἐποπτεία καὶ βιβλιογραφικὴ ἐνημέρωση' L. G. Benakis. Βιβλιοθήκη Γενικῆς Παιδείας, 5 (Athens, 1978), 228 f.; S. I. Kuruses, Μανούηλ Γαβαλάς είτε Ματθαίος μητροπολίτης Εφέσου (1271/2–1355/60), Α' Τὰ βιογραφικά (Athens, 1972), *passim*.

⁵¹ G. E. Pentagolos, Οἱ ιατρικὲς γνώσεις Ἰωσῆφ τοῦ Ῥακενδύτη καὶ ἡ σχετικὴ ἀνέκδοτη ἐπιστολὴ τοῦ Μιχαὴλ Γαβρᾶ (Athens, 1970). The letter in question is no. 293 (according to the edition of Fatouros). Apparently Joseph has sent him medicines, to which, along with Joseph's prayers, Gabras attributed the healing of his eye disease. Whether this means anything more than that Joseph had a certain pharmacological knowledge may be left undecided here. If he took care of the sick monk Merkurios over a period of years, he may have acquired such knowledge in the course of time. There remains the reference of John Actuarius (Ideler, I, 348, 32 ff.), that he himself had blood samples taken and discussed his own disease and its diagnosis with John. All this proves Joseph's interest in medicine, which perhaps can be traced back to a certain study of these things, which belong to the φυσικὸν μέρος τῆς φιλοσοφίας. This interest is apparent as well in the inclusion of medicine in the encyclopedia which was planned. It does not prove, of course, that Joseph was, or can be designated, *ἰατρός* in the technical sense.

⁵² Mich. Gabras, *ep.* 22 (ed. Fatouros, II, 48 f.) to Georgios Lakapenos and John Zacharias Cf. Kuruses II, p. 251 f.; Georg. Lakapenos *ep.* 24 (ed. Lindstam, p. 150–54).

which was written in the past—and not only in the so-called Classical Age. Furthermore, they were eager to examine their own cultural heritage and, in a given case, to defend it against teaching and tendencies which had developed. To this cultural heritage belong, perhaps even preferentially, technical, geographical, mathematical, and astronomical texts. Thus the interest for the φυσικὸν μέρος τῆς φιλοσοφίας of which John speaks is quite suitable to this period. Already in the thirteenth century we notice a revival of those interests, and it continues into the fourteenth century. One is not satisfied with textbooks, but writes commentaries, e.g., on Euclid and Diophantos; one reads critically the *Geography* of Ptolemy of his *Tetrabiblos*, *Almagest*, or the commentaries of Theon, and so on.⁵³ Astronomy, although not totally separated from astrology, experienced a particular growth, and this is perhaps also a reason for the intense preoccupation with these topics in the circle of Emperor Andronikos II, who like no other Byzantine emperor was quite dependent on such things. That is indeed a different problem in conjunction with the decadent period of the empire. To this circle, which Nikephoros Gregoras designates as a “gymnasion” of rhetoricians and philosophers, and which stands far above the Platonic Academy, the Aristotelian “Lykeion” and the Attic Stoa,⁵⁴ belong—among others—Konstantinos Akropolites, Nikephoros Chumnos, Nikephoros Gregoras and also Theodoros Metochites, whose picture we recognize in a mosaic on the narthex of the Kariye Djami in Constantinople. Although he was truly a man of well-rounded education, he dedicated himself at the age of forty-three to the study of astronomy upon the advice of the emperor. Astronomy was the cardinal topic of the time, and it is not accidental that the proem to the Στοιχείωσις ἐπὶ τῇ ἀστρονομικῇ ἐπιστήμῃ of Theodoros Metochites includes a defense of astronomy and astrology. One can read more about the role of Metochites in this circle of men and in the context of these studies in the works of I. Ševčenko.⁵⁵

⁵³ Cf. I. Ševčenko, “Theodore Metochites, the Chora, and the Intellectual Trends of His Time,” in P. Underwood (ed.), *The Kariye Djami, IV: Studies in the Art of the Kariye Djami and Its Intellectual Background* (Princeton Univ. Press, 1975), 19–91, esp. 19–24.

⁵⁴ Nikeph. Gregoras, *Byz. Hist.*, ed. L. Schopen, X, 1 (ed. Bonn. I, 471, 11–12).

⁵⁵ Cf. esp. I. Ševčenko, *op. cit.*; *id.*, *La Vie intellectuelle et politique à Byzance sous les premiers Paléologues. Etudes sur la polémique entre Théodore Météchite et Nicéphore Choumnos* (Bruxelles, 1962 [CBHByz Subsidia 3]); *id.*, “Théodore Météchites, Chora et les courants intellectuels de l’époque,” in *Art et société à byzance sous*

I can now return to John Actuarius. Since he belongs to this group, then the question poses itself *eo ipso* (especially if one knows the rules according to which the learned discussions were conducted in this circle), whether John engaged in the study of astronomy. This question can be answered positively.

In the body of letters of Georgios Oinaiotes⁵⁶ there are four letters addressed to an unnamed ἀκτούάριος which fall within the years 1321 to 1327. There is no reason to assume that this ἀκτούάριος is not our John, even if we cannot explain exactly the relationship alluded to in the letters. We learn from these letters not only of John's interest in astronomy and that he wants to borrow one of Ptolemy's works from Oinaiotes, but also that his knowledge of astronomy is so great that Oinaiotes wants to be instructed by him. The instruction takes place, and Oinaiotes makes such good progress that he finally asks his teacher to get him into the circle of astronomers which has sprung up around Metochites. Gregorios Chioniades,⁵⁷ who turned to astronomy after first studying medicine, and who attained great prominence for the impetus given to astronomy in the late Byzantine period, is also counted among John's friends, as can be seen from one of his letters.

John testifies to his knowledge of, and interest in, astronomy in his own work. In the treatment of the κρίσιμοι ἡμέραι (critical days) in book II of his work on diagnosis, he includes his knowledge in a rather lengthy excursus.⁵⁸ That is, he determines not only the fourth, the seventh, the fourteenth,

les Paléologues. Bibliothèque de l'Institut Hellénique d'Etudes Byzantines et Post-Byzantines de Venise, 4 (Venice, 1971), 13–39; *id.*, “Society and Intellectual Life in the Fourteenth Century,” *XIV^e Congrès Internat. des Etudes byzantines* (Bucarest, 6–12 septembre 1971) *Rapports* I, p. 7–30; cf. *id.*, *Society and Intellectual Life in Late Byzantium* (London, 1981); also the discussion by A. Kazhdan, in *Greek Orthodox Theological Review*, 27 (1982) 83–97.

⁵⁶ G. Fatouros, S. I. Kuruses and D. Reinsch are preparing an edition of his letters. Here I am relying upon the references in Kuruses II, p. 260 ff., with pertinent bibliography (cf. Kuruses I, p. 380). Concerning John's knowledge of astronomy, cf. also I. Ševčenko, *Etudes sur la polémique*, *op. cit.*, 83, note 3 and 87, note 3, where this corpus of letters of Laur. marc. 356 is taken into account.

⁵⁷ Cf. D. Pingree, “Gregory Chioniades and Palaeologan Astronomy,” 18 (1964), 134–60; L. G. Westerink, “La Profession de foi de Grégoire Chioniadès,” *REB*, 38 (1980), 233–45. Letter no. 15 (ed. I. B. Papadopoulos [Thessalonike, 1929]) to a certain Ιοάννης, a doctor, who is designated as γλυκύς, is not addressed to the later patriarch, as S. I. Kuruses in the *Epimetron* to his essay on John XIII Glykys (Ἐπ. Ἐτ. Βυζ. Σπ., 41 [1974], 372) has correctly demonstrated. It is rather a question of an allusion to the name “Zacharias” (cf. Kuruses II, p. 257 ff.).

⁵⁸ Ideler, II, 433–40; cf. also *De urinis* V, 10 (Ideler, II, 128–32) and *ibid.* VI, proem. (Ideler, II, 145).

the twentieth, the twenty-seventh day, which would actually be enough for a doctor; he also gives the reasons why this is so. He speaks of the influence of the sun on the seasons and especially of that of the moon on people. He is also conscious that he has gone rather far afield on this subject, for at the end of the chapter he calls himself back with the remark that he has said enough both for those who speak briefly of it and for those who wish to understand more about it. Therefore John studied astronomy, and we know also that he collected the pertinent literature in his library. One must keep in mind that, apart from the fact that this is suitable to John's time, in which astronomy was considered the *κοσμοφάσιον μάθημα*,⁵⁹ this science obviously—and even earlier—had a preferential place in the education of doctors. Michael Italikos in his monody praises the knowledge of astronomy of the *ἀκτονάριος Pantechnes*.⁶⁰ Finally we can go all the way back to Galen, who said of the doctors that they stood with the *γεωμέτραι, ἀριθμητικοί, φιλόσοφοι, ἀστρονόμοι* and *γραμματικοί ἔγγιστα θεῷ*, that is, in the closest proximity to God.⁶¹

Let me now come to John's works. In our present context we are interested in the medical writings.⁶² Seen as a whole, they represent the last great compendium of Byzantine medicine. Here we have an accomplishment which for its penetration and thorough study of the material is not to be underestimated, even if the treatment is of uneven originality. Whatever John may have taken over from the past, and that is surely a great deal (that is in the nature of the thing), one must keep in mind that he arranged his material in a precise, systematic, and even stylistically pithy presentation, so that his work is not only handier and more synoptical but is also more useful than Galen's. A comment in the satire *Timarion* shows to what great extent the Byzantines, and particularly the Byzantine doctors, were put off by Galen's verbosity.⁶³

⁵⁹ Cf. Kuruses II, 262.

⁶⁰ Ed. P. Gautier, p. 110–15, esp. 112, 2.

⁶¹ Galen (ed. Kühn), I, 7.

⁶² In any case, we are acquainted with another letter to Theodoros Pediasimos (ed. M. Treu, *Theodori Pediasimi eiusque amicorum quae extant*. Programm Victoria-Gymnasium Potsdam, Ostern 1899 [Potsdam, 1899], 39 f. and 59 f.). Cf. A. D. Komines, *Tὸ βυζαντινὸν ἔργον ἐπίγραμμα καὶ οἱ ἐπιγραμματοποιοί* (Athens, 1966), 183 f., with a reference to three more recent editions of one of the epigrams. The question about further writings of John, e.g., commentaries on Aristotle or Hippocrates, need not be dealt with here. Concerning translations from the Arabic, cf. below note 81.

⁶³ Ed. R. Romano, *Byzantina et Neo-Hellenica Neapolitana*, 2 (1974), 715 ff. (p. 75). Galen is not present at court. He had retreated in order to finish his treatment on fevers. The supple-

The most important writings in his medical opus are three in number:

1. Περὶ οὐρῶν, in Latin *De urinis*, in seven books, is available in the edition of Ideler.⁶⁴ It was edited in Latin in 1519 in Venice, and then about another ten times in the sixteenth century. In 1531 an incomplete German translation appeared. Resting upon Galen's theory and evaluating the pertinent observations of Galen and Hippocrates, as well as of later Byzantine scholars—for example Theophilos—and frequently including his own experience, John offers in this work a compendium of the knowledge in this area which reaches up to his own time. Color, consistency and residue of the urine are extensively discussed, as well as the diagnostic/prognostic conclusions which one can draw. Even here diagnosis and prognosis are separated. I will make only two comments on this work, since it is not of primary importance to the topic of the new edition.

As the final chapter shows,⁶⁵ this piece of writing obviously represents John's maiden work in the field of medicine. He composed it in order to contribute to the understanding of medicine (*τέχνη*), as an expression of his knowledge. A doctor of his ability and with his ambitions had to give proof of his knowledge with one or more publications in order to develop a career. John also explains why, exactly, he chose this topic. There were many extensive writings in the other fields of medicine. In other authors he had found only scattered remarks concerning urine. He therefore consciously chose a topic which had not been treated to excess and with which he could help the *τέχνη* progress.

Another assertion is important in this context: in undertaking the work he observed the healthy people and the sick people with whom he had daily contact, and at the same time he compared the different *λόγοι* with one another.⁶⁶ Ten years ago a paper appeared under the title "Empirie und Theorie in der Harnlehre des Johannes Aktuarios."⁶⁷ In posing this question the author intended, as he says, to arrive at a "more concrete evaluation" of Byzantine medicine. This consists in his assertion that John attacks those doctors who

ments were to have a much greater range than what was already available.

⁶⁴ Regarding the older editions of John's works, which cannot all be listed here, cf. L. Choulat, *Handbuch der Bücherkunde für die ältere Medicin*, 2nd ed. (Leipzig, 1841; repr. 1956), 152–54; cf. also Sarton, *Introduction*, III, pt. 1, p. 889–92.

⁶⁵ VII, 18 (Ideler, II, 191–92).

⁶⁶ VII, 17 (Ideler, II, 190).

⁶⁷ F. Kudlien, *Clio Medica*, 8 (1973), 19–30.

refer only to the *πεῖρα* much more than Galen did; by *λόγος* John means simply physiological speculation; basically he assumes the mind-set of antiquity, and so forth. I am by no means certain whether the sequence in which the two concepts *λόγος* and *πεῖρα* appear in John's works (*λόγος*—*πεῖρα* or *πεῖρα*—*λόγος*) is really to be taken in the sense of a hierarchical ordering; and I cannot otherwise agree to each interpretation of the author. What is even more important, *λόγος* means the theoretical penetration of a subject which forms the presupposition for the results acquired from the *πεῖρα*. John distinctly emphasizes this at the conclusion of his work, when he points out that some details may be missing, but that they are contained implicitly. The work is written for the *συνετού*, that is, for people with insight and understanding, for those who have daily practice with the *λόγοι* and who therefore could easily grasp the significance of something he may not have explicitly mentioned, and are thereby able to make the diagnosis or prognosis.⁶⁸ I cannot see any degrading of the *πεῖρα* when John says: "whoever possesses a sharp intellect and a natural talent for accuracy will easily arrive at the appropriate conclusions from what has been said as well as from what has not been said, even though he may have only the slightest practical experience."⁶⁹

2. A second work by John bears the title *Περὶ ἐνεργειῶν καὶ παθῶν τοῦ ψυχικοῦ πνεύματος καὶ τῆς κατ' αὐτὸν διαίτης* ("Concerning the activities and illnesses of the psychic pneuma and the corresponding mode of living"). It is the only work of John published also in the Greek language before the nineteenth century (in Paris 1557). It is also available today in the edition by Ideler,⁷⁰ and it is identical with John's two letters to Joseph Rhakendytes, contained in the cod. Riccardianus 31, and was supposed to be included in Rhakendytes' large encyclopedia.⁷¹ It includes two books. The pneumatic theory is treated; and of the three types of pneumata—*φυσικόν*, *ζωτικόν*, *ψυχικόν*—the last receives preferential treatment. It deals with the influence of the pneuma on health and sickness and how physical diseases can also influence the soul. The following is discussed: the dependence of the material *pneuma psychikon* on the spiritual func-

tions—sense perception (*αἰσθησίς*), imagination (*φαντασία*), power of judgment (*μέρος δοξαστικόν*), understanding (*διάνοια*), and reason (*νοῦς*)—as well as their relations to one another and the question of their localization in the particular parts of the brain. The second book contains dietetic and hygienic rules.

3. The third of John's comprehensive works on medicine is known in the current literary and medical history under an abbreviated title as the so-called *Θεραπευτικὴ μέθοδος*, in Latin *De methodo medendi*. In the introductory chapter John himself gives the title as *βιβλίον περιέχον πᾶσαν τὴν τέχνην ἐν ἐπιτόμῳ* and that is indeed correct; for "*De methodo medendi*" refers, strictly speaking, only to the second part of the work. In the introductory chapter, we read that it is a comprehensive medical handbook which John has written for his friend Alexios Apokaukos, when the latter had to undertake a diplomatic mission to the "hyperborean Scythians."⁷² The work includes six books. The first two books deal with diagnostics in general, then with specific cases of disease. Both of these books appear to have circulated independently under the title *Περὶ διαγνώσεως*. They are edited in Ideler.⁷³ The Greek text of the rest of the work is not edited. Therapy is the theme of books III and IV. They are available only in the Latin translation of Mathisius (Venice, 1554). Finally, useful drugs for the treatment of internal and external diseases is the subject of the last two books (Latin translation by Ruelle, Paris, 1539). This work, a compendium of the entire field of medicine, is to be edited first. The manuscripts, which I will not go into further here, are numerous, regarding both the entire opus as well as the individual parts. Both the arrangement of the books as well as the subdivisions, particularly in the last two books about drugs, vary in the manuscripts. The enumeration of the books differs, according to whether the first two books under the title *Περὶ διαγνώσεως* are counted separately. The same is true, *mutatis mutandis*, also for the last two under the title *Περὶ φαρμάκων συνθέσεως*. To put it briefly, the history of the tradition puts up a series of problems which are not all clarified. We can pin down the following: that John himself had the idea of composing six books, two on diagnosis, two on therapy, and two on *pharmaka* or drugs. And he also followed through on this idea. In one manuscript we read: "Now that

⁶⁸ VII, 18, 10–11; Ideler, II, 192.

⁶⁹ II, 10, 16; Ideler, II, 42 f.

⁷⁰ Ideler, I, 312–86.

⁷¹ Cf. M. Treu, *BZ*, 8 (1899), 45 f. and 63 f.; Pentogalos, (cf. note 51 above); cf. also R. Criscuolo, "Note sull' 'Enciclopedia del filosofo Giuseppe," *Byzantion*, 44 (1974), 255–81.

⁷² Cf. note 11 above.

⁷³ Ideler, II, 353–463.

diagnosis and the causes of diseases have been dealt with in the first two books, and therapy for individual maladies in the following two, the last two deal with *pharmaka* which are useful in treating internal and external diseases.”⁷⁴

The work is written for Alexios Apokaukos, and not on the command of the emperor as one so often reads. This opinion has crept into the pertinent literature because of an incorrect reference of a *genitivus absolutus*.⁷⁵ The question as to which diplomatic legation is meant shall not be discussed here,⁷⁶ any more than the question about the medical interests of Apokaukos, which must be seen in association with the well-known manuscript of Hippocrates (Cod. Paris. gr. 2144), and the question about the picture of Apokaukos there.⁷⁷

In the preface of book I, John gives detailed information about the difficulties which resulted from the fact that the book is supposed to be a short one, a βραχυσύλλαβος δέλτος.⁷⁸ He is afraid of insulting the τέχνη by such a terse treatment. Besides, it is difficult to present the life of mankind and its lifestyles to someone who is unfamiliar with the material in just a few words. He is about to give up the undertaking, but the thought of friendship and the usefulness of the book for his friend prevent him from doing so; he wants to give it to him in remembrance of their friendship. When doubts once again assail him as to whether he can treat such a multi-layered topic in the brevity demanded, he recalls—and this is an important point regarding the problem just touched upon—that Apokaukos often made very sensitive remarks during their discussions of medical topics, such that John often challenged his friend to go deeper into the study of medicine.⁷⁹ Apokaukos was therefore in a position to understand correctly even a brief presentation. When one considers the extent of Galen’s or Myrepsos’ works, one cannot shrug off such remarks as a mere *captatio benevolentiae*. After

a brief recapitulation of those elements which a doctor must know *a priori*—such as the causes of illness, what is conducive to health, the natural resources of the living organism, which drugs are available—there is an outline of humoral physiology. Finally, and in some detail, the teaching concerning the pulse in its different aspects is treated, whereby psychic causes are also considered. Then the diagnosis of urine is briefly dealt with, and finally the diseases are listed according to the well-known principle *a capite ad calcem*.

From the introduction of the second book we learn that it was written in the following spring (after the first book had been written in the fall), when Apokaukos was expected to return from his diplomatic mission.⁸⁰ In the meantime, as already mentioned, Joseph Rhakendytes has asked John for a composition. The second book defines and treats the concept of fever and the ιατρεία, also the ιατρικοί ἡμέραι, then the diseases of the skin and the individual parts of the body. At the end of the book, John says that he wants to write another dealing with the θεραπευτικαὶ μέθοδοι. In the introduction to the third book John refers to the two previous ones, in which he dealt with diagnosis per se and its relations to the individual parts of the body and with the causes of diseases; he also points out the methodical structure (ἐμμεθόδως) of his work.

Indeed, other authors of medical manuals in Byzantine times dealt with diagnosis and therapy, but not in this manner. For the most part, they dealt with diagnosis, therapy and drugs, one after the other. But John does not want to divide his compendium into small pieces; he sticks to the concept of a brief manual. If now and again he spends more time on a particular topic, then it is for the sake of clarity of presentation. If something appears to be missing, then he makes the required brevity the culprit. This is a convenient alibi; he must take more time with some illnesses in order to make the therapy clear. As an example of the versatility of the methods of treatment he cites phlebotomy. It constitutes the beginning of the third book, which deals also with purgation, suppositories, enemas, gargling, and so on, as well as the effects of baths, sleep, and gymnastic exercises. Therapy for the individual parts of the body is the subject of the fourth book. Of course in both these books drugs are named; but John says explicitly that he does not intend to treat the whole σύνθεσις, so as not to disturb the symmetry of the book. It seems preferable

⁷⁴ Cod. Monac. gr. 69, fol. 255v.

⁷⁵ Ideler, II, 353, 9–11. The “Illustrierte Geschichte der Medizin” (cf. note 2 above) speaks of a medical leader whom the emperor needed for his crusade against the Scythians (p. 468). Indeed, on the same page, in a legend to an illustration, mention is made that Apokaukos “went to the northern Scythians (Russians) in the capacity of ambassador” toward the end of the thirteenth(!) century. He took along the book on therapy, “which John Actuarius, his fellow-pupil, had composed at his request.”

⁷⁶ This question will be dealt with elsewhere.

⁷⁷ Cf. H. Belting, *Das illuminierte Buch in der spätbyzantinischen Gesellschaft*. Abh Heidelberg, philos.-hist. Kl. 1970, 1 (Heidelberg, 1970), 59 f. and 83 f., with ill. 31 and 32.

⁷⁸ Ideler, II, 353, 14 f.

⁷⁹ Ideler, II, 354, 20 ff.

⁸⁰ Ideler, II, 418.

to him to write a separate treatise on the simple and compound drugs.

The recurring introductions clearly show, in my opinion, that the work was not written in a single sitting; perhaps it was given to Apokaukos piece-meal. Since John continually emphasizes and substantiates his principle of organization, we can conclude that it was not the usual one. And in fact, neither Aëtios, nor Alexander of Tralles, nor Paulos Aiginetes employed this principle. The symmetry of the individual books can scarcely have been the real reason for this manner of proceeding; rather it is an approximation to the system of medical instruction. Apart from that, there is a logical principle at work: from the general to the specific, from the cause to the therapy, including the help of the person's natural resources, up to the *ultima ratio*—the drugs. In the books dealing with therapy these drugs are generally simply named, the inducing effects are given but measures are not. At the end of the fourth book John explicitly states that another book is to follow, concerning the qualities and the quantitative composition of the drugs, which may not be used by everyone in the same way. Very important are the mixture, the person's habits and age, the season, and so forth. At the beginning of the fifth book, John explains that he does not intend to discuss the preparation of the drugs (cooking, grating, etc.) unless absolutely necessary. He specifies the composition, the indication, and the proportions as well as the specific peculiarities of those drugs which can be used for several diseases. For most of the drugs, the indications are recognizable from the headings; a specialist in diagnostics and therapeutics could put together other drugs according to the specified principles. This is one of John's basic ideas. In a general way he also lists his sources: he collected the drugs from different books (of other authors), but also from his own experience (*πείρα*), when they were nowhere written down. Finally he lists those which he himself has put together according to the *ἰατρικὴ μέθοδος*. Each individual drug has been experientially tested and is worthy of recommendation. He does not list the drugs in alphabetical order; the sequence corresponds to the one he used in his books on diagnosis and therapy. And there are always references to the pertinent literature in the other books. He goes from the more general to the more specific, and he also keeps the organizational principle of going from the internal to the external. After a brief discussion of the different forms in which the drugs can be administered

(τροχίσκοι, καταπότια, διντίδοτοι, ἀλοιφαί, etc.), the medicines for individual diseases follow. Obviously, among the multiplicity of drugs listed there is a high percentage of those for which only the name, the indications, the individual ingredients with ratios, and the dosage are given. There are, however, other medicines which include very exact data concerning their preparation, the manner in which they work during the course of the disease, the different methods of application, storage, and so on. What is offered is a *prima vista*, simply a long catalogue of formulae such as is found in Myrepssos' large collection, with which John must have been familiar. From the outset, John intends to list only the more effective prescriptions (*χρησιμώτερα*). He continually presupposes that the doctors know of the powers of *simplicia*, or ought to know of them. If that is the case, they can mix their own medicines, but they must always keep in mind the individual patient's constitution. This is emphasized over and over: one must carefully consider what is given to whom (*ποῖα ποῖοις*); one must adapt the medicine to the sick person, just as the shoemaker adapts his shoemaker's last to the foot (*καλαπόδιον*). In these books about drugs there are evaluations of the formulae of different doctors, a series of personal assertions, that is, about medicines which John himself tested or put together. And several times he gives his sources, once again in a general way. They are Greek doctors of older and more recent times, but also foreigners (*ἰατροί παλαιοί τε καὶ νεοί Έλλήνων καὶ βαρβάρων*). If our information in the manuscripts is correct, then John translated Arabic medical writings or examined them for publication.⁸¹

I have already pointed out briefly the problems of textual transmission, and would like to say a few words about the new edition. In general I can say that the manuscripts offer no insurmountable problems, although some are in very poor condition and can no longer be photocopied. The transmission in the case of the two books about drugs is somewhat more problematic. It is a matter of technical literature, which demands suitable training. The preliminary work on other medical authors, which we do in Munich, is of great help here, especially the Oreibasios-Index. The publication will

⁸¹ Concerning the tract on urine by ibn-Sinā, the translation of which John improved, cf. Costomiris (note 5 above), 415; cf. also Ullmann, *Medizin*, 156. The text is edited in Ideler, II, 286–302. Cf. Costomiris, 416 concerning the translation of the writing Περὶ λοιμωχῆς τοῦ Παξῆ, which in Cod. Paris. gr. 2228 is attributed to John.

include an index of technical terms as well as an apparatus of testimonies. Here too, our preliminary work on other authors is useful. As far as the annotation is concerned, there are, corresponding to the nature of the matter, difficulties arising from the fact that not a few of the pertinent Greek texts are not available in appropriate editions; but that must remain a *cura posterior* which can finally be tackled only after appearance of the edition, as is usually the case with large publications in the field of natural science.

At the beginning I promised to return to the question of evaluating the accomplishments of John Actuarius, and I will do so very briefly. I will keep my remarks brief, with regard to the stage of the work, and I remind myself of the words of O. Temkin, who once said: "John Actuarius knows that he has something to say. Yet I hesitate to include him in my discussion. He lived at a time when the West had produced its great figures of scholastic medicine and when the influence of the West would have to be taken in account. As far as I know, not even the necessary philological preparation for such a task has as yet been made."⁸² Some points in this statement will have to be completed and made more precise—a few perhaps even corrected—in the future, if the future blesses us with industrious scholars and the necessary leisure for science. What I can say today is the following:

1. John Actuarius systematically summarized the medical knowledge of his time, insofar as he condensed it into an ordered system. It is certain that some branches of medicine were quite strongly stressed, others less so.

2. John did not invent this system, but he did follow through on it. There are few passages in the work discussed in which he wears the topic out or gives himself over to his own fancies.

3. It is not a collection of popular medicine, but a work written for doctors by a doctor, and indeed by a doctor who possessed a great deal of practical experience. This is clear from his own opinions, prescriptions, evaluations of medicines of others, as well as from a whole series of personal assertions.

4. John rests upon the state which medicine has reached at his time, and in his cultural sphere in particular. That does not mean, however, that he simply took notes from the current medical literature, nor that he copied Galen or, as some assert,

Paulos Aiginetes. When one looks through the medico-historical literature, it is a favorite game to look for supposedly new discoveries by these Byzantine doctors, who are treated rather shabbily anyway. In John's case lead poisoning, for example, or trichocephalus dispar, would come into question. I do not wish to play this game at this moment. But I can give a brief example, which will clearly show the problematic involved in such matters. In an essay on John's ophthalmology⁸³ one can find the remark that in his valuation of the amblyopia he took the optic nerve into consideration. But one can confirm that Aëtios already spoke of the δπτικῶν νεῦρον. For another example, according to all appearances John praises, in a personal assertion, a prophylactic agent used in treating diseases of the eye which has been experientially tested, is quite excellent and also very well known. And then one ascertains that the same medication can be found among the *kollyria* of Aëtios, indeed that Galen had already described it. The manuscripts of our Actuarius do not allude to Galen. Here the question arises concerning the value of the personal statements, which in each case must be thoroughly scrutinized; and that is not always easy with the material at hand. Quite apart from the fact that John could scarcely afford to claim such a well-known medication for himself, it would be wrong, in my opinion, to shrug him off simply as a plagiarist. One must consider as well that the content of the concept "plagiarism" was entirely different in the Middle Ages than it is today, among other things.

On some points I have made comparisons, for example, with aural diseases. The result is that, in view of the multiplicity of descriptions, nuances and medicines, John describes exactly the more important symptoms and then cites the therapeutic methods. In the books on drugs, he offers the most important compounds, first the anodynes, and then the therapeutic drugs, whereby he does not forget the lifelong habits. Nothing is absolutely new. John says, to use his own words, what is necessary (τὰ δέοντα), and this is, apart from the systematical treatment, consistently and logically thought through. In the therapy it is the incentive for one who has studied the subject to arrive at new and better remedies.

It is similar with the affections of hair. Once again the systematic treatment is striking. John knows the

⁸² "Byzantine Medicine: Tradition and Empiricism," *DOP*, 16 (1962), 97–115, esp. 114.

⁸³ J. Hirschberg, "Die Augenheilkunde bei den Griechen," *Archiv f. Ophthalmologie*, 33 (1887) 47–78.

available material well. He gives terse and exact definitions, in that he lists exactly the differences among the different forms of the disease. Again he differentiates between anodynes and therapy; and the drugs which he lists are well tested ($\deltaιὰ πείρως βεβασανισμένα$). In this connection there is a study of cosmetics, just as we saw with Galen and before him; but John emphasizes that medicine and cosmetics are two different things, and he mentions cosmetics in this case only because the remedies to be applied are in some instances the same. The reason why he speaks about it in connection with coloring agents for black hair is interesting: some consider white hair to be a sign of disgrace and old age. Actually one should not even talk about it. But he does so anyway, so as not to give the impression that he does not know anything about such matters. This criterion places him squarely in the tradition of Byzantine authors. One could further cite the description of sweats or that of fevers: everywhere the picture is similar.

John Actuarius was certainly a practitioner, but over and above that, he was a man of science who thoroughly studied his field and thought it through

theoretically. Whether one can shrug all this off as physiological speculation, I am not so sure. He was not the revolutionary discoverer and research worker, but could he have been that? He was open to new knowledge, even if it came from foreigners. In my opinion, the historian of medicine, insofar as he is an historian, does not primarily have the task of evaluating the color of urine against its specific gravity.

I do not think that we will arrive at the day when we glorify Byzantine medicine as a whole, and I do not think that we should even attempt such a thing. I do believe, though, that we, as historians of Byzantine culture as well as of medicine, have the obligation to investigate matters thoroughly. When that happens, we can perhaps come to an evaluation against the entire backdrop of medical history; to raise or lower one's estimation of things beforehand merely blocks one's perception of things as they really were.

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